



SEE NOTE 2 FOR FOOTER BOULDER REQUIREMENTS

- NOTES:**
1. TOE PROTECTION SHALL TAPER TO EXISTING GROUND AT BOTH ENDS.
 2. FOOTER BOULDER REQUIRED IF THE HEADER BOULDER DEPTH DOES NOT MEET OR EXCEED SPECIFIED TOE PROTECTION HEIGHT.
 3. LENGTH OF BOULDER TOE TO BE SPECIFIED ON PLANS.

DESIGN VARIABLES			
	EXAMPLE	REACH	REACH
BOULDER DIMENSIONS	1'x2'x2'	--	--
BACKFILL MATERIAL ¹	B, 57, E	--	--
TOE PROTECTION HEIGHT	5'	--	--
HEIGHT ABOVE BASE FLOW ²	1.0'	--	--

¹ WELL MIXED GRADATION (APPROXIMATELY 80% STONE, 20% EARTH) STONE MIX TO BE COMPRISED OF THE SPECIFIED MATERIALS: A = CLASS A RIP-RAP, B = CLASS B RIP-RAP, 57 = #57 STONE E = EARTH. #57 STONE NOT TO EXCEED 10% OF THE STONE MIX. THE REMAINDER OF THE MIX SHALL BE EQUAL PARTS CLASS A AND CLASS B RIP-RAP IF BOTH ARE SPECIFIED OR AS DIRECTED BY THE ENGINEER.

² IF BASE FLOW NOT PRESENT, HEIGHT SHALL BE SET PER PLAN ELEVATION, NOT TO EXCEED 1.0' ABOVE CHANNEL BED.

*ENGINEER TO ADJUST AS NECESSARY, MINIMUMS CANNOT BE ADJUSTED WITHOUT CITY APPROVAL

NOT TO SCALE



CHARLOTTE-MECKLENBURG
STORM WATER SERVICES
GENERIC DETAIL REQUIREMENTS

BOULDER TOE

DRAFT - NOT TO BE USED FOR CONSTRUCTION

SHEET NUMBER	
1 OF 1	
STD. NO.	REV.
XX.XX	